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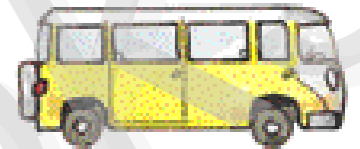


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Introduction

This book introduces you to some amazing transport machines. You may have already visited a railway station or travelled on an airliner—but the chances are you have not yet journeyed into space!



The illustrator has taken off the walls of some of the buildings and the sides off some of the machines pictured in this book. This means you have the extra treat of being able to look inside them. Now you can take a close look at an airliner's engines, the flight deck of a Space Shuttle, the engine room of a large ferry ... and much more.



See how many of the the pictures at the bottom of the pages you can find in the main illustrations.

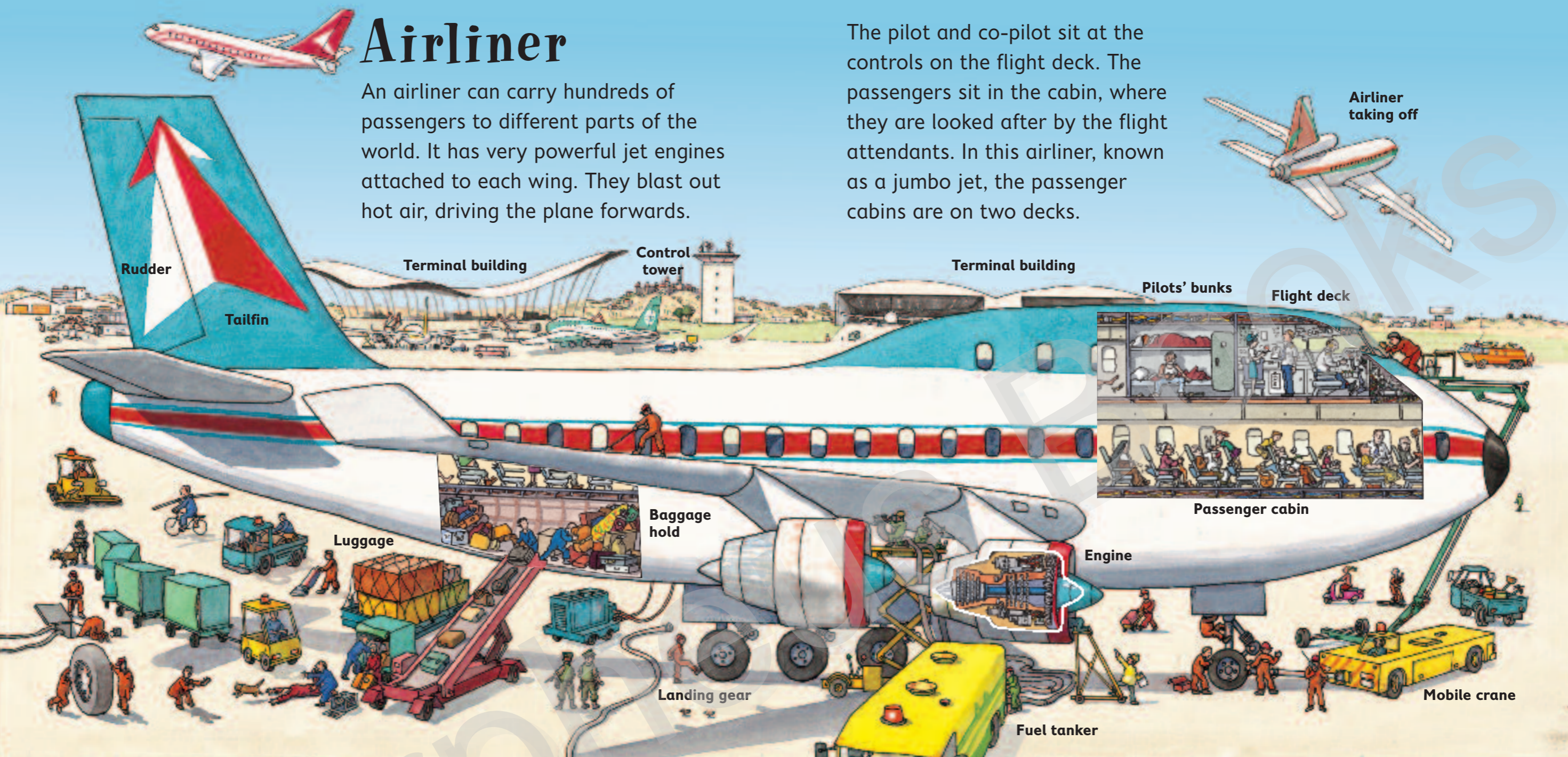
Look out for the toy planes!
One is hidden in every scene ...



Airliner

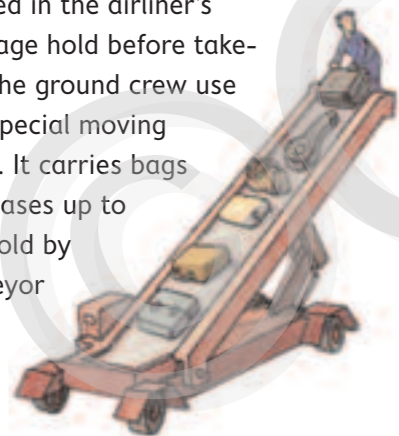
An airliner can carry hundreds of passengers to different parts of the world. It has very powerful jet engines attached to each wing. They blast out hot air, driving the plane forwards.

The pilot and co-pilot sit at the controls on the flight deck. The passengers sit in the cabin, where they are looked after by the flight attendants. In this airliner, known as a jumbo jet, the passenger cabins are on two decks.

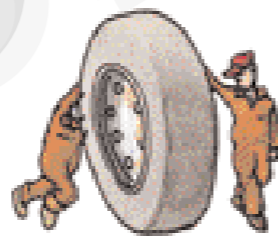


Airliner taking off

The passengers' luggage is stowed in the airliner's baggage hold before take-off. The ground crew use this special moving ramp. It carries bags and cases up to the hold by conveyor belt.

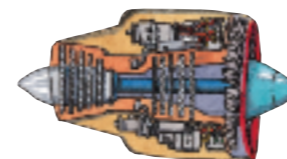


Many different vehicles are used to keep things running smoothly at an airport. These mechanical road sweepers keep the runway clear, so the aircraft can take off and land smoothly.



The wheels on an aircraft are called its landing gear. A jumbo jet has 18 giant wheels. They are all needed to carry its enormous weight.

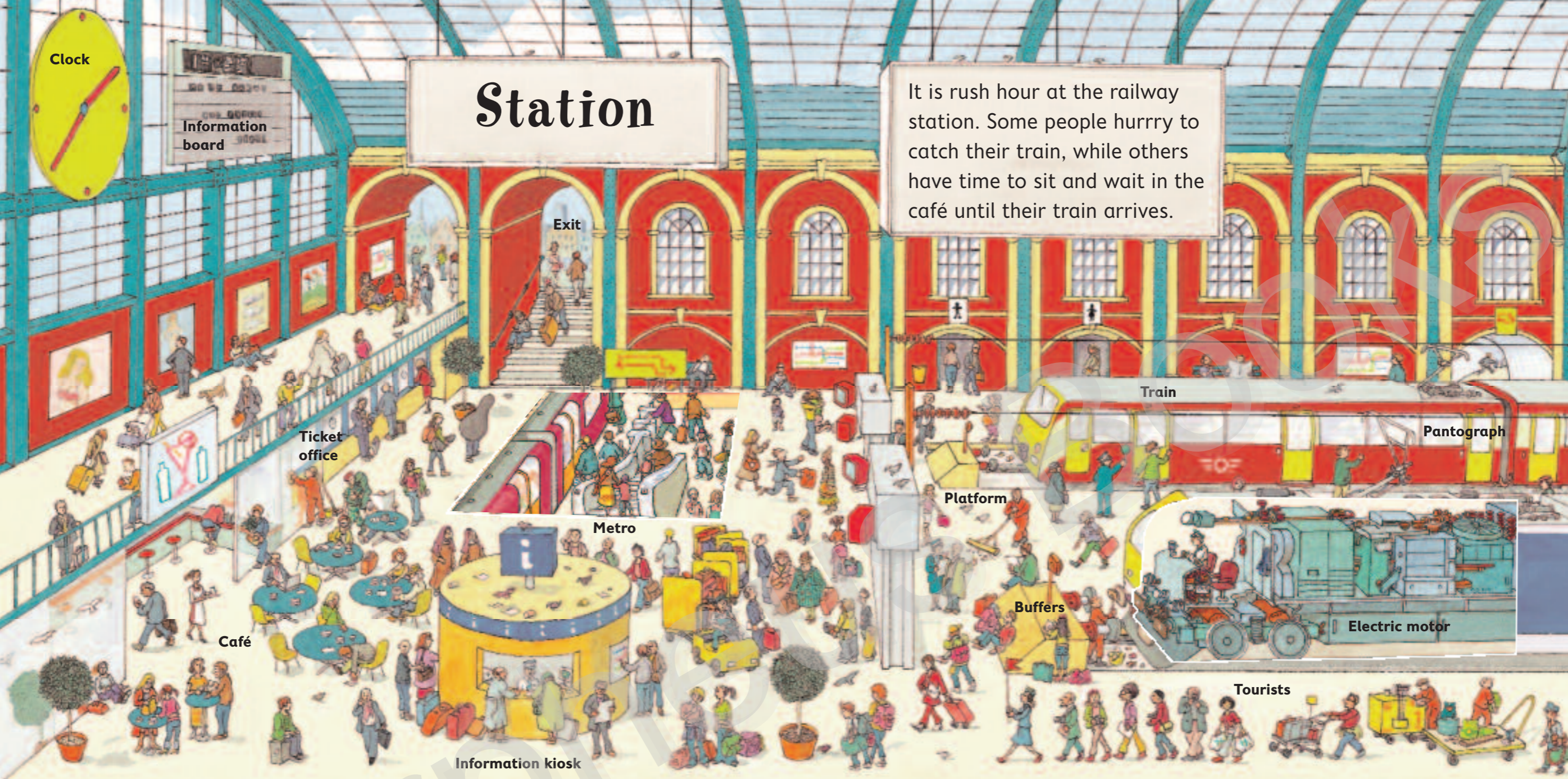
A jumbo jet is powered by turbofans, a kind of jet engine. Hot exhaust gas escapes at high speed out of the back of the engine. The backward-flowing air propels the plane forwards.



Air traffic controllers work inside a control tower. They direct aircraft to and from the runways. They decide when it is safe to take off or land.

To take off, an airliner races at high speed down the runway. Its wings are shaped so that air moving over the wing moves faster than the air beneath it. This provides a force called lift. The airliner will climb into the air if the lift is greater than its weight.





Station

It is rush hour at the railway station. Some people hurry to catch their train, while others have time to sit and wait in the café until their train arrives.

Information board

Clock

Exit

Ticket office

Train

Pantograph

Platform

Metro

Buffers

Electric motor

Café

Tourists

Information kiosk



The information board shows when the next trains will be leaving. It also tells passengers if their train has been delayed or cancelled.



Passengers visit the information kiosk to find out the times of trains, how they can reach a certain place, whether they must book seats, and how much the fare will cost.



A guide meets the tourists at the station platform. Holding up a flag for them to follow, she leads them to the coach that will take them to their hotel. There are often bus stations close by railway stations to take passengers on the next leg of their journey.

At airports and large railway stations you might see baggage trailers like this one being pulled along by an electric vehicle. The passengers can now board the train more speedily.



The metro station is located under the main station. Metro lines crisscross the city under the ground. Because they avoid the traffic in the streets, metro trains are the often quickest way to get around town.

Trains are powered by electric cables that run above the tracks. A device on the roof of the locomotive called a pantograph collects the electricity, which then powers the motor inside.

